

Observations from “on the ground” from China

- ❑ Capital spending and Fab capacity, although growing rapidly in the last decade, are only small portions to the world total
- ❑ Locally owned Fab Technology and capacity (SMIC, etc) not enough but may improve in the next 5 years, but not enough to eliminate the need either foreign owned Fabs in China, or Chinese controlled capacity in the international foundry market (TSMC, Glofo, Samsung, Intel). SMIC building 2 new 28nm Fabs with Gov't support
- ❑ Developing SOC technologies, such as licensed non-IA cores (ARM, MIPS...) that includes indigenous IP blocks for specific functions such as encryption, wireless, power management, is well within the current capability of many Chinese engineering companies today.
- ❑ ARM/Android design and manufacturing ecosystem has relatively low barrier to entry.
- ❑ Demonstrated ability to export aggressively (Huawei, Lenovo, windmills, solar panels,.....)
- ❑ The current complexities and scaling to sub-20nm technology coupled with the transition to 450mm manufacturing technology will result in manufacturing consolidation. This may force China's hand to take action sooner, in less than 5 years, before the industry consolidates with Intel, TSMC and Samsung as leaders.
- ❑ Rampant piracy may be discouraging indigenous development of software
- ❑ Concerns of IP dilution/loss in China (design/mask/process technology)